

Tuesday

January 13, 1987



Daily SNAP

Soviet & Abstracts Publication

Published by

FOREIGN TECHNOLOGY DIVISION

Author: Savel'yev, A.

Title: IRE DEVELOPS AUTOMATION FOR INSPECTING SEMICONDUCTORS

Primary source: Leninskoye znamya, December 17, 1986, No. 286 (20306), p. 1, col. 2

Extract: The precision and reliability of elements of electronic devices and systems play a decisive role in determining their performance. Processes that take place in semiconductors, however, are such that making and inspecting semiconductors require very sharp electronic 'eyes' and a very shrewd electronic 'brain.'

A group of scientists and designers of the USSR Academy of Sciences' Institute of Radio Engineering and Electronics (IRE) under the direction of academician Yu. V. Gulyayev and Doctor of Physical-Mathematical Sciences A. G. Zhdan, head of a laboratory, has developed an automated system for complete processing of experimental data from spectroscopy of electronic states (defects) on 'semiconductor--dielectric' boundaries (ASPOED), and also an automated complex for inspecting and diagnosing electronic materials and products using electrophysical methods.

What benefits do these developments offer?

THE ASPOED system seemingly 'filters out' useful data from the mass of information from experiments, and with it the accuracy of

(continued next column)

determining characteristics of defects increases by more than 10 times. This greatly increases the understanding of the nature of defects, and as a practical benefit it makes it possible to develop new instruments for more reliable control of processes for production of microelectronic devices.

The automated complex will help to determine and control characteristics of semiconductor materials, devices and microstructures using various electrophysical methods which traditionally are used in semiconductor physics research.

This complex is needed today by many research laboratories, and especially by industry laboratories. It will help to improve substantially the control of processes and to identify causes of defects. The complex has been made ready for series production, and the rest is up to interested clients.

* * *

Author: Mokhorov, E., correspondent (Kaluga)

Title: AUTO ELECTRONICS ORGANIZATIONS SEEKING WAYS THROUGH BUREAUCRACY

Primary source: Sotsialisticheskaya industriya, December 30, 1986, No. 299 (5290), p. 1, cols. 1-3

Extract: In the near future, microprocessor-based devices which exist now only in the form of a single prototype will control the ignition systems of passenger cars and trucks

(continued next page)